CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE
OF MASTER OF SCIENCE IN AGRONOMY

AGRI 815:   POST HARVEST PHYSIOLOGY OF FIELD CROPS

STREAMS: MSC AGRONOMY BLOCK TWO/THREE   **TIME: 3 HOUR**

DAY/DATE: THURSDAY 8/08/2019   **2.30 P.M - 5.30 P.M.**

INSTRUCTIONS:
- **Answer ALL Questions in Section I and any TWO in Section II**
- **Do not write anything on the Question paper**

SECTION I: [20 MARKS]
1. (a) Explain the application of spear sampling method of obtaining samples from sacks to determine quality.   [7 Marks]

   (b) Using suitable examples, describe periods of time that have been identified during which food may be lost.   [3 Marks]

2. (a) Explain briefly why storage is an essential element of the agricultural product post harvest system.   [6 Marks]

   (b) Describe the type or levels of food loss/waste experienced along the crop product value chain.   [4 Marks]

SECTION II: [40 MARKS]
3. (a) Discuss the gaps in postharvest management of food crops and possible measures that should be taken to overcome them.   [10 Marks]

(b) Describe the utilization of photometric properties in the sorting of agricultural products.   [5 Marks]

(c) In your opinion, why should the government invest in postharvest loss management?   [5 Marks]

4. (a) Discuss the dry cleaning methods that can be adopted for efficient chaff management in

maize. [12 Marks]
(b) Discuss the global influences that affect achievement of food security and safety.   [8 Marks]

5. (a) Discuss in Africa the internal factors that can contribute to increase in post harvest loss
during agricultural product management. [14 Marks]

(b) The primary objective of post harvest system is to maintain the best possible quality and
avoid spoilage during the storage period. Describe the basic mechanisms which lead to
spoilage. [6 Marks]
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